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PATENT

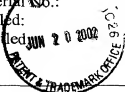
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Atty. Docket No.: 24518/2012

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Balasubramanian *et al.*
Serial No.: 09/771,708
Filed: January 30, 2001
Titled: ARRAYED BIOMOLECULES
AND THEIR USE IN
SEQUENCING

Examiner: Forman, Betty J.
Group Art Unit: 1634
Conf. No.: 9485



CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8a

I hereby certify that this correspondence (and any paper or fee referred to as being enclosed) is being deposited with the United States Post Office as First Class Mail on the date indicated below in an envelope addressed to Commissioner for Patents, Washington, D.C. 20231.

Joyce C. Hersh

Name of Person Signing

Signature of Person Mailing Paper

Commissioner for Patents
Washington, D.C. 20231

RESPONSE TO RESTRICTION REQUIREMENT

AND

PRELIMINARY AMENDMENT

Dear Sir:

In response to the Restriction Requirement dated March 15, 2002, Applicants elect for prosecution the claims of Group I (Claims 1-15), drawn to a device comprising an array of molecules, classified in class 435, subclass 287.2, with traverse. Applicants reserve the right to file a continuing application or take such other appropriate action as deemed necessary to protect the non-elected inventions. Applicants do not hereby abandon or waive any rights in the non-elected inventions.

An extension of time to respond to the Restriction Requirement is respectfully requested. A Petition for an Extension of Time and the appropriate fee are being filed concurrently.

Please enter the following amendments and remarks.

AMENDMENTS

In the Claims

Please cancel claims 1-42 without prejudice.

Please add new claims 43-51 as follows.

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43. (NEW) A device comprising an array of polynucleotide molecules immobilized on a solid surface, wherein each molecule comprises a polynucleotide duplex covalently linked to form a hairpin loop structure, one end of which comprises a target polynucleotide, and the array has a surface density which allows the target polynucleotides to be individually resolved.
44. (NEW) A device according to claim 43, wherein immobilization to the solid surface is via covalent attachment.
45. (NEW) A device according to claim 43, wherein adjacent molecules of the array are separated by a distance of at least 10nm.
46. (NEW) A device according to claim 45, wherein the molecules are separated by a distance of at least 100nm.
47. (NEW) A device according to claim 45, wherein the molecules are separated by a distance of at least 250nm.
48. (NEW) A device according to claim 43, having a density of from 10^6 to 10^9 molecules per cm^2 .
49. (NEW) A device according to claim 48, wherein the density is from 10^7 to 10^8 molecules per cm^2 .

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can
50. (NEW) A device according to claim 43, wherein at least one arrayed polynucleotide has a second polynucleotide hybridized thereto.
51. (NEW) A device according to claim 43, wherein the arrayed polynucleotide is of known sequence.
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REMARKS

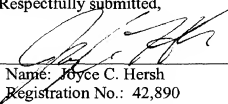
Claims 43-51 are currently pending in the application. Claims 1-42 are canceled. The new claims find support in the specification, particularly at page 3, lines 20-27; page 9, line 20 to page 11, line 15; page 11, lines 24-31; page 12, line 27 to page 13, line 8; Example 4 (page 26, line 26 to page 27, line 30); and originally filed claim 15. No new matter is added.

Applicants have elected for prosecution the subject matter of the claims of Group I, directed to a device comprising an array of molecules. Applicants respectfully submit that new claims 43-51 are directed to the same subject matter, and respectfully request that the claims be entered into the application.

Please charge any under- or overpayments to Deposit Account 16-0085, Reference No. 24518/2012.

Respectfully submitted,

Date: June 14, 2002


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